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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/587,617
Filing Date: July 27, 2006
Appellant(s): LEIGRAF ET AL.

Max W. Garwood
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 09-30-2010 appealing from the Office action mailed 05-12-2010.

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

Claims 26-30, 32-52 are pending. Claims 26-30, 32-38 and 52 are rejected.

Claims 39-51 are withdrawn from consideration.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the

subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

| | | |
|--------------------|----------------|---------|
| WO 02/103,109 A1 | Korhonen | 12-2002 |
| US 2003/0178165 A1 | Bobsein et al. | 09-2003 |
| US 2002/0117277 A1 | Johnson et al. | 08-2002 |

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 26-29, 32-34, 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Korhonen (WO 02/103109 A1) in view of Bobsein et al. (US 2003/0178165 A1).

Respect to claim 26, Korhonen discloses a method for the production of a wood-free coating, matt or semi-matt paper web (W), comprising the steps of:

precalendering the paper web using at least one apparatus (500 and/or 800) for precalendering (abstract, Fig 4, page 23 lines 1-10);

coating at least one side of the paper web (W) by using at least one apparatus (200, or 600) for applying one of a liquid or pasty application medium (abstract, Page 12 lines 11-39);

drying the paper web using at least one apparatus (400 or 710) for drying the paper web thereby create a wood-free coating with a roughness level between 2.2-3.4 μm (PPS) or 2.1-2.8 μm (See pages 4 lines 5-15; page 18 line 18-31; page 22 lines 16-28, Fig 6, pages 23 lines 13-30).

Korhonen fail to disclose that the roughness level and a gloss value in combination having values that lie within a triangularly shaped region defined by a first point, a second point, and a third point, said first point being 0.8 μm roughness level and 3% gloss value, said second point being 0.8 μm roughness level and 35% gloss value, said third point being 3.9 μm roughness level and 3% gloss value. However, Korhonen clearly disclose a roughness level between 2.2-3.4 μm (PPS) or 2.1-2.8 μm (within applicant's roughness value). Bobsein discloses to measure the sheet glass using TAPPI 75 ° (paragraph 0054). Bobsein further discloses to the sheet gloss of the coating is in the range of 4.2 to 19.9% (Table 2) or 19.5% to 19.9% (Table 4), or 4.7 to 15.9 % (Table 6), or 4.7 to 14.8% (See Table 2, Table 4, Table 6, and Table 9). These sheet gloss value of Bobsein in combination of Korhonen roughness level around 2.2 μm or 2.1 μm (PPS) certainly would lie within a triangularly shaped region defined by a first point, a second point, and a third point, said first point being 0.8 μm roughness level and 3% gloss value, said second point being 0.8 μm roughness level and 35% gloss value, said third point being 3.9 μm roughness level and 3% gloss value. It would have been obvious to one having ordinary skill in the art, at the time of invention, to modify Korhonen in view of Bobsein by performing routine experiment to obtain optimal gloss

value because it has been held that determination of workable ranges is not considered inventive.

Respect to claim 27, Korhonen discloses the step of coating the paper web (W) on the first side by way of an other apparatus for applying one of a liquid pasty application medium prior to the precalendering (500 or 800) (See Fig 1, page 16 lines 25 to page 17 line 12, page 22 lines 6-15). Respect to claim 28, Korhonen discloses the coating apparatus s one of a film coating device and a curtain coating device (page 12 lines 10-16, pages 22 lines 7-15)

Respect to claim 29, Korhonen discloses the coating step is carried ounce on both side of the paper web prior to said precalendering (500 or 800), said at least one apparatus for applying one of liquid (include water) and pasty application medium being a film coating device (Fig 1, page 16 lines 25 to page 17 line 12, page 22 lines 6-15).

Respect to claims 32 and 37, Korhonen discloses the step of conveying the paper web through at least one film press (300) prior to a coating step (600) (abstract) or prior to said precalendering step (abstract).

Respect to claim 33, Korhonen disclose the apparatus for precalendering is a soft calendar with at least one nip (pages 13 lines 22-25, col. 14 lines 4-10, page 20 lines 15-20); a shoe calendar with at least one nip and a smoothing unit (pages 20 lines 15-20, page 21 lines 1-22, fig 4). Respect to claim 34, Korhonen discloses the coating apparatus includes a first apparatus that coats a first side of the paper web, the apparatus is curtain coating device (page 12 lines 10-16, pages 22 lines 7-15).

Claims 30, 35, 36, 38, 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Korhonen and Bobsein as applied to claims 26-29, 32-34, 37 above, and further in view of Johnson et al. (US 2002/0117277 A1).

Respect to claims 30 and 35, Korhonen and Bobsein fail to disclose the apparatus for applying one of liquid and pasty application medium includes a first apparatus and a second apparatus being a curtain coating device (claim 30); or include a second apparatus that coats a second side of the paper web, the second apparatus being a curtain coating device (claim 35). However, Korhonen clearly discloses to use plurality of coating device on both side of the web (Figure 4, page 22 lines 6-15). Korhonen further disclose it is possible to use curtain coating process (page 12 lines 10-15). Johnson teaches to use plurality of curtain coaters to coat both side of the web (paragraph 0026). It would have been obvious to one having ordinary skill in the art, at the time of invention, to modify because equivalent and substitution of one for the other would produce an expected result. Further, Johnson's process would improve wear resistant of the paper (paragraph 0007).

Respect to claim 36, Korhonen discloses the step of drying the paper web after the paper both side of the paper web is coated (abstract).

Respect to claim 38, Johnson disclose that the paper web is not conveyed through any smoothing apparatus nor the paper is conveyed through any calendering apparatus after the paper web has been coated by at least one apparatus for applying one of liquid and pasty application medium (paper slurry) (See Fig 1, Fig 3). It would have been obvious to one having ordinary skill in the art, at the time of invention, to

modify Korhonen and Bobsein in view of Johnson because it will improve wear resistant of the paper.

Regarding to claim 52, Korhonen discloses a method for the production of a wood-free coating, matt or semi-matt paper web (W), comprising the steps of:

precaldendering the paper web using at least one apparatus (500 and/or 800) for precaldendering (abstract, Fig 4, page 23 lines 1-10);

coating the paper web (W) after the precaldendering step on at least one side of the paper web by using at least one apparatus (200, or 600) for applying one of a liquid or pasty application medium (abstract, Page 12 lines 11-39);

drying the paper web using at least one apparatus (400 or 710) for drying the paper web, after the paper web has been passed through at least one device for the application of liquid or pasty application medium in a running direction of the paper web,

thereby create a wood-free coating with a roughness level between 2.2-3.4 μm (PPS) (See pages 4 lines 5-15; page 18 line 18-31; page 22 lines 16-28, Fig 6, pages 23 lines 13-30).

Korhonen fails to disclose the gloss value in the range from 3-35% TAPPI 75 °. Bobsein discloses to measure the sheet gloss using TAPPI 75 ° (paragraph 0054). Bobsein further discloses to the sheet gloss of the coating is in the range of 4.2 to 19.9% (Table 2) or 19.5% to 19.9% (Table 4), or 4.7 to 15.9 % (Table 6), or 4.7 to 14.8% (See Table 2, Table 4, Table 6, and Table 9). Bobsein also discloses the sheet gloss value of around 30% including 30.74% or 31.72% or 29.34 %, etc (See Table 3, Table 4, and Table 7). It would have been obvious to one having ordinary skill in the art,

at the time of invention, to modify Korhonen in view of Bobsein by performing routine experiment to obtain optimal gloss value because it has been held that determination of workable ranges is not considered inventive.

Regarding to claim 52, Korhonen and Bobsein fail to explicitly disclose that the paper web is no longer led through any further smoothing or calendaring device. Johnson disclose that the paper web is not conveyed through any smoothing apparatus nor the paper is conveyed through any calendaring apparatus after the paper web has been coated by at least one apparatus for applying one of liquid and pasty application medium (paper slurry) (See Fig 1, Fig 3). It would have been obvious to one having ordinary skill in the art, at the time of invention, to modify Korhonen and Bobsein in view of Johnson because it will improve wear resistant of the paper.

(10) Response to Argument

Regarding to claims 26-29, 32-34 and 37, the Appellant state " The cited prior art does include values for roughness and gloss, but in every case where these values are associated with each other, they lie outside of the area claimed by Appellants. The combination of the cited references does not provide any disclosure where associated roughness and gloss values fall within Appellants' claimed area. This lack of disclosure in the cited references underscores the novelty of Appellants' method". The examiner strongly disagrees. First, Korhonen clearly discloses the roughness level between 2.2-3.4 μm (PPS) or 2.1-2.8 μm (See Fig 6, pages 23 lines 13-30). Bobsein discloses to measure the sheet glass using TAPPI 75 ° (paragraph 0054). Bobsein further discloses to the sheet gloss of the coating is in the range of 4.2 to 19.9% (Table 2) or

19.5% to 19.9% (Table 4), or 4.7 to 15.9 % (Table 6), or 4.7 to 14.8% (See Table 2, Table 4, Table 6, and Table 9). These sheet gloss value of Bobsein in combination of Korhonen roughness level around 2.2 μ m or 2.1 μ m (PPS) certainly would lie within a triangularly shaped region defined by a first point, a second point, and a third point, said first point being 0.8 μ m roughness level and 3% gloss value, said second point being 0.8 μ m roughness level and 35% gloss value, said third point being 3.9 μ m roughness level and 3% gloss value.

The appellants further state "Table 2 of Bobsein, et al, is instructive to show that roughness (smoothness) and gloss are related and that this table illustrates particulars of the paper made using the Bobsein, et al. method. However, the teaching that roughness and gloss are related underscores that the association of gloss and roughness cannot simply be declared to exist by finding two references that teach one aspect and not the combination of the attributes claimed by the Appellants." The examiner strongly disagrees. The sheet gloss and roughness (or smoothness) are two independent variables. They are not related to one another a function of each other as argued by appellants. If the sheet gloss and roughness are related as a function with each other (as argued by Appellants), then it is contradicted with appellant's own invention as shown in Figure 4. Further, in Table 6, Bobsein shown it is possible to have a Sheet Gloss value without having it depends on the roughness value. Thus, the examiner still maintains the previous ground of rejection under 35 USC 103(a).

Regarding to claim 52, the Appellants state "Johnson et al. disclose a multi-layer printable wear resistant paper, with Figs. 1 and 3 both being schematic diagrams of a

papermaking process. These figures show the web hanging in midair, which infers that some further processing will follow. These figures and the cited prior art fail to recite the claimed negative limitation. Appellants' claimed invention is a method that specifically excludes the paper web from being led through any further smoothing or calendering device once the paper web has been coated." The examiner disagrees. First, Johnson never discloses that his paper making process used a smoothing or calendering device. Thus, the examiner interprets that Johnson's paper web is no longer led through any further smoothing or calendering device. Second, in paragraph [0024], Johnson describes a paper making process wherein the last step is "the wear resistant overlay 22 is dried and prepared for shipping is known in the art". Third, just because Figs 1 and 3 both show the web hanging in midair, it does not mean that Johnson teaches that additional smoothing and calendering process is necessary to complete the process. Thus, the examiner still maintains the previous ground of rejection under 35 USC 103(a).

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/BINH X TRAN/

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